

REMARKS

Claims 1-3, 4, 9-11, 15 and 16 are rejected by the Examiner. Claims 4, 6-8 and 12-14 are objected to. Claims 1-16 remain pending.

Claim Objections

The Examiner objects to claims 9 and 10 because of informalities relating to the proper use of the plural versus singular forms of the noun “output.” The applicant respectfully traverses the objections.

Regarding claim 9, claim 9 adds limitations that address a reference voltage, inverting input, the first output for the first differential transconductance (Claim 5) amplifier and the first output for the second differential transconductance amplifier (Claim). Because the claim addresses both first outputs, the plural form of the noun is used (“first outputs”).

Regarding claim 10, claim 10 addresses second outputs for the first and second differential transconductance amplifiers, respectively, so the plural form of the noun is also used (“second outputs”). The applicant respectfully requests withdrawal of the objections to claims 9 and 10 based on these points.

Claim Rejections

35 U.S.C. §112 paragraph 2 – Claims 9 and 10

The Examiner rejects claim 9 and 10 for insufficient antecedent basis for “said first outputs” and “said second outputs,” respectively. The applicant respectfully traverses the rejection.

The applicant refers the Examiner to Claim 5 from which each ultimately depends, which recites:

“said differential amplifiers each having;...
a **first output** coupled to said inverting input; and
a **second output** coupled to said non-inverting input;”

Because claim 9 refers to a first output for each of the first and second differential amplifiers, the plural form of the noun outputs is used in the claim. Similarly, claim 10 refers to each of the second outputs recited in claim 5, so the plural form of the noun “outputs” is used. In summary, antecedent basis may be found in claim 5. The applicant respectfully requests withdrawal of the rejection of claims 9 and 10 based on these points.

35 U.S.C. §102(e) – Claims 1-3, 5, 9, 10, 15 and 16

The Examiner rejects claims 1-3, 5, 9, 10, 15 and 16 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,781,451 issued to Kwan et al. The applicant respectfully traverses the rejection of the claims.

Regarding claims 1 and 15, the Examiner asserts that Kwan et al. teach a CMFB which can be read as a feedback amplifier. (Office Action at P. 3, See Claim 1) The applicant respectfully asserts that Kwan et al. variously teach the CMFB to be capacitors C_{1a} and C_{2a} (FIG. 9; Col 9, Ln 25-29) and a switched capacitor circuit (Col 9; Ln 19-20). They also teach that “at least one set of capacitors always remains connected across the amplifier inputs and outputs” (emphasis added) in the CMFB (Col 9; Ln 38-39) and that the “present invention provides at least two sets of capacitors” (emphasis added) for comparing the desired common-mode voltage signal V_{cm} with the reference voltage and for sampling the actual output common-mode voltage to produce correctly voltage V_{b4}, respectively. (Col 12, Ln 23-33). Kwan et al. do not teach the use of a feedback amplifier for the CMFB. The applicant respectfully requests withdrawal of the 102(e) anticipation rejection of claims 1 and 15 based on these points.

Claims 2, 3 and 16 depend from claims 1 and 15, respectively, and so contain each of their limitations. For at least the reasons stated above for claims 1 and 15, the applicant respectfully requests withdrawal of the rejection of claims 2, 3 and 16.

Regarding claim 5, the Examiner asserts that Kwan et al. teaches that “a CMFB can be read [as] an op-amp having inverting (ON/834) and non-inverting (OP/833) inputs.” (Office Action at P. 3). Similar to the discussion above for claim 1, Kwan et al. do not teach an op-amp for the CMFB. Additionally, Kwan et al. teach in FIG. 9 a CMFB circuit without inverting and non-inverting inputs – just two ends of capacitors. They

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teach away from the use of an op-amp for CMFB. If either pair of inputs was to be inverted, the circuit would not operate as described. The applicant also observes that the CMFB circuit taught by Kwan et al. will not drive a load and would be useless in many advantageous applications. The applicant respectfully asserts that Kwan et al. do not teach an op-amp having inverting and non-inverting inputs and a detector output (Claim 5) coupled to other components and requests withdrawal of the 102(e) anticipation rejection of claim 5 based on these points.

Claim 9 depends from independent claim 5 and claim 10 from claim 9, so each of claims 9 and 10 contain the limitations of claim 5. For at least the reasons stated above for claim 5, the applicant respectfully requests withdrawal of the rejection of claims 9 and 10.

35 U.S.C. §103(a) – Claim 11

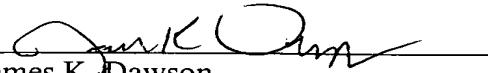
The Examiner rejects claim 11 as unpatentable over Kwan et al. The applicant traverses the rejection. For at least the reasons stated above for claim 10 from which claim 11 depends, the applicant respectfully requests withdrawal of the rejection of claim 11.

Conclusion

The applicant believes claims 1-16 are now in condition for allowance. A Notice of Allowance is respectfully requested at the earliest possible date.

Respectfully submitted,

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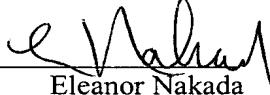


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Date


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